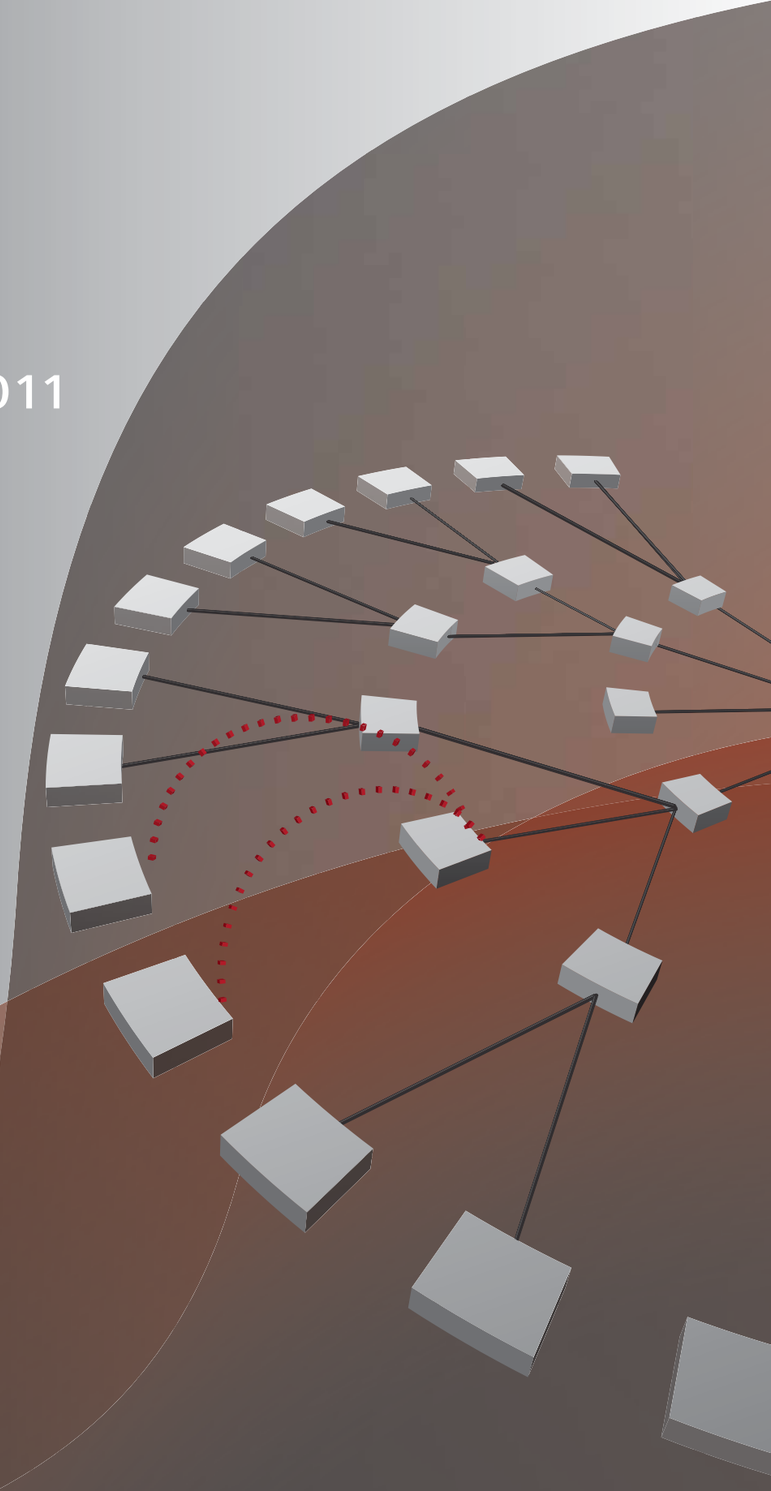
Edge-corE NETWORKS

Product Guide 2011



Edge-corE NETWORKS

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Edge-Corestions

Transforming the way the world connects.

Edge-Core Networks Corporation is a professional networking solution provider offering a complete range of enterprise-level and service provider/carrier Ethernet networking equipment and services to customers and partners around the world. Edge-Core was spun off from Accton Technology Group into an independent subsidiary in 2010.

From wired to wireless, from the edge to the core, is Edge-Core Networks underlying philosophy. Today, Edge-Core Networks offers complete network infrastructure solutions that range from wired to wireless. Our products can be found at enterprises and carriers all over the world. With a broad product portfolio spanning switching, wireless, and management, our products are designed to deliver superior performance, greater choice, and maximum flexibility while reducing the overall cost of ownership for our customers and partners. We understand in a competitive marketplace, the ability to provide innovative, user-friendly features on a timely basis is crucial to our shared success. Having a firm grasp on the core technology enables Edge-Core Networks to repond proactively to shifting market demands, providing clients with timely and up-to-date feature additions to facilitate network growth and scale as technologies advance.

SMC Networks, a leading provider of of LAN/Connectivity devices, is a branding division of Edge-Core Networks focused on the SMB and SOHO markets. This year SMC celebrates its 40th anniversery as a cutting-edge, technology pioneer.

Edge-Core Networks has an extensive portfolio of switching and wireless products to meet the varied needs of clients. Edge-Core products, powered by our own EdgeCOS operating system, offer the reliability and real-time performance enterprises and carriers demand. Our Wi-Fi access points have been deployed in some of the harshest environments anywhere, providing reliable network services to remote regions around the world without fail. To satisfy the needs of enterprise customers, Edge-Core indoor Wi-Fi access points offer a long list of manageability and QoS features, making unified access at the enterprise a reality.

ECView Pro, our state-of-the-art, multi-vendor network management software, and the brand-new ECView Traffic Analyzer give network administrators powerful tools to control and monitor networks with both ease and reliability. Among the new ECView Pro features now available are: WMI support, an enhanced action system, a customizable dashboard, enhanced Edge-Core and SMC Networks device support, increased productivity, and online updates. Additional improvements available this year include mapping enhancements, OAM, CFM, a Web interface, a fault manager, and more. ECView Traffic Analyzer, to be released in Q2, offers network visualization, traffic baselining, active directory integration, and application analysis.

Better living through innovation has always been the centerpiece of our vision. We strive to make our vision a reality by continuously introducing new products and services so that the world may connect faster, easier, and better. An agile network solution provider, Edge-Core Networks will continue to pursue our mission of joining people together, enhancing life, and promoting green environments worldwide.

Contents

Service Provider Solutions **02**

Aggregation Switch 06

Access Switch 07

Access CPE 11

Enterprise LAN Solutions **12**

LAN Core / Data Center Switch 17

LAN Distribution Switch 19

LAN Edge / Access Switch 21

Network Management **26**

Wireless Solutions **30**

Service Provider / Wireline Carrier Solutions

Ethernet is now the dominant technology used in new carrier network deployments. However, to fully integrate Ethernet into a service provider network requires more than just plugging in cables and connecting network switches. That's why most Edge-Core Networks' switches feature EdgeCOS, our own robust Ethernet switch operating system, designed to minimize technical difficulties and simplify set-up wherever possible.

Metro Ethernet Forum (MEF)

Edge-Core carrier Ethernet switches are currently undergoing Metro Ethernet Forum (MEF) certification. MEF is the defining body for carrier Ethernet, a global industry alliance comprising more than 150 organizations including telecommunications service providers, cable MSOs, network equipment/software manufacturers, semiconductors vendors and testing organizations. The MEF's mission is to accelerate the worldwide adoption of carrier-class Ethernet networks and services. The MEF develops carrier Ethernet technical specifications and implementation agreements to promote interoperability and deployment of carrier Ethernet worldwide.

Ease of Access

Years of working with carriers have allowed Edge-Core's engineers to gain invaluable first-hand knowledge of how to design systems that suit various carrier needs. Our switches offer the following features to enable effortless deployment and ease of access:

- Network ports and management console are located on the front panel
- Fan tray and power supplies are accessible from the front panel
- Interface for alarm

Provider Bridging (Q-in-Q)

VLANs are needed to segment traffic from different customers on the network. However, the traditional VLAN implementation allows for only 4000 VLANs to be configured in the network, which is far from sufficient. In addition, the customer themselves might implement VLANs of their own, thereby further complicating the network administration. For example, how would the carrier differentiate a customer's VLAN from their own? Without proper resolution, it is simply impossible to deliver multimedia service and enforce different service license agreements.

Edge-Core Networks' carrier Ethernet solutions effectively address these issues through the use of Q-in-Q.

- The 4096-VLAN limitation is removed
- Customer VLANs and Service VLANs are effectively segmented, creating a clear demarcation between carrier and customer networks.
- Quality of service and class of service may be mapped to different VLANs, so that different service license agreements may be implemented.

Operation, Administration, Maintenance

The carrier must have at its disposal methods to detect physical and link layer faults at critical network nodes. Without this capability, expensive truck rolls are required to diagnose and mitigate network failures.

Edge-Core Networks' carrier Ethernet solutions aim to resolve the issue through the use of 802.3ah OAM, which offers the user the following benefits

- Strictly a Layer 2 technology, no IP addresses are required for OAM activities to take place
- Automatic discovery of compliant network devices
- Loopback control, so statistics from clients may be queried
- Notification of critical events

Edge-Core Networks' carrier Ethernet solutions are comprised of the following three elements:

Aggregation Switch
Access Switch
Access CPE

Aggregation Switch features:

- High port density and high performance, with available 10G Ethernet uplink ports on certain models
- Powerful Layer 3 unicast and multicast routing
- Available in copper or fiber configurations
- Full IPv6 implementation
- IP Clustering

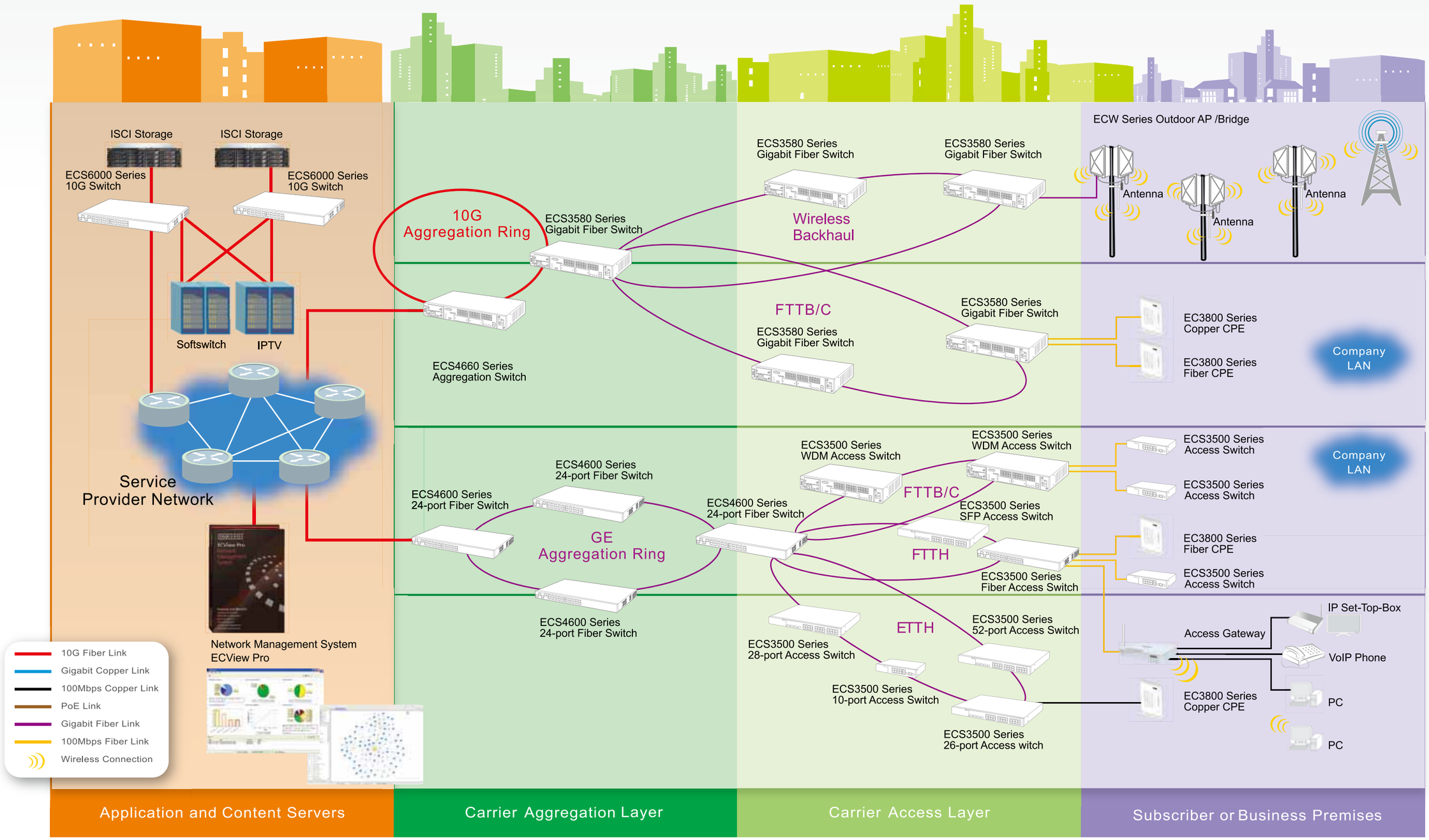
Access Switch features:

- Available in a multitude of port configurations, from low port density to high port density
- High performance, high bandwidth, with available 10G Ethernet uplink ports on certain models
- Full Layer 2 management functionality
- Layer 4 policing, for added security and control.
- Flexible implementation of VLAN, QoS, and CoS
- sFlow support, enabling sophisticated traffic analysis and network optimization

CPE Features:

- 802.3ah OAM, allowing the administrator to monitor and provision the device with ease
- Fiber or copper configuration
- 100Base-FX or 100Base-BX support
- Built-in fiber tray
- IGMP support

Service Provider / Wireline Carrier Solutions



Edge-Core Service Provider Aggregation Switches

ECS4600 Series

ES4612
ECS4810-12M
ES4624-SFP
ES4626-SFP
ECS4610-24F

Edge-Core's Gigabit Aggregation Switch Series is ideal for service provider aggregation layer service for converged voice, data and video network needs. They provide a cost-effective solution, wire speed L2/L3 switching and routing, an abundant feature set, robust security functionality, and comprehensive QoS features so service providers can deliver the scalability and reliability necessary for a company's productivity.

ECS4600 Series switches offer an extensive range of features for the aggregation edge. With IEEE 802.1w Rapid Spanning Tree protocol, 4600 series provide loop free networking together with redundant links to the core network with rapid convergence. IEEE 802.1s Multiple Spanning Tree Protocol allows a spanning-tree instance per VLAN, for Layer 2 load sharing on redundant links. They provide enhanced security features for connectivity and access control, including ACLs, authentication, and advanced security with IEEE 802.1X.

New Green Friendly

Product Model	ES4612	ECS4810-12M	ECS4610-24F	ES4624-SFP	ES4626-SFP
Fixed Ports					
1000BASE-X Port	8		22	16	16
Gigabit Combo (RJ-45 / SFP) Port	4	12	2	8	8
Out-of-Band Mgmt FE Port		1		1	1
Console Port	1	1	1	1	1
Modular Uplinks					2 x 10G XFP uplink Ports
DB15 Alarm		1			
Physical Configuration					
Switch Functionality	Layer 3	Layer 2	Layer 3	Layer 3	Layer 3
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	16MB	32MB	64MB	32 MB	32 MB
SDRAM for CPU	64MB	128MB	256MB	128 MB	128 MB
Packet Buffer	1MB	1MB	0.75MB	2MB	2MB
Flexible AC/DC Dual Power Source		•			
Performance					
MAC Address Table Size	16K	16K	8K	16K	16K
Switching Capacity	24Gbps	24Gbps	48Gbps	48Gbps	88Gbps
Forwarding Rate	17.9Mpps	17.9Mpps	35.7Mpps	35.7 Mpps	65.5 Mpps
Environment					
Fan / Fanless	Fan	Fanless	Fan	Fan	Fan
Green Saving		•			
Temperature Range	0℃ to 45℃	0℃ to 65℃	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃
Stacking					
Software Stacking		•	•	•	•
Carrier Enhancements					
G.8032 (ERPS)		•			
Y.1731		•			
802.3ag		•			
802.1ag		•			
Routing					
IPv6 Support			•	•	•
OSPF	•		•	•	•
DVMRP	•			•	•
PIM-DM	•		•	•	•
PIM-SM			•	•	•
VRRP	•		•	•	•
L2 Features					
Q-in-Q		•	•	•	•
Voice VLAN		•	•	•	•
MAC Based VLAN		•	•	•	•
VLAN Group	4K	4K	4K	4K	4K
QoS					
802.1P Priority Queues	•	•	•	•	•
DiffServ (RFC2474)	•	•	•	•	•
Security					
IEEE 802.1Q VLAN	•	•	•	•	•
DHCP Snooping		•	•	•	•
RADIUS	•	•	•	•	•
TACACS	•	•	•	•	•
SSH/SSL	•	•	•	•	•
Management					
Port Mirroring	•	•	•	•	•
DHCP Server	•	•	•	•	•
sFlow		•	•	•	•
Dimension					
(HxWxD) cm	4.4 x 44 x 23	4.17 x 44 x 27	4.17 x 44 x 27	4.4 x 44 x 43	4.4 x 44 x 43
Weight	4.2kg	3.32kg	3.55kg	8.2kg	8.3kg

Edge-Core Carrier-Grade Access Switches

ECS3500 Series

ECS3810-26T
ES3528
ES3528-WDM

Edge-Core's ECS3500 Switch Series is optimized to provide service providers with easy-to-maintain hardware, and application-specific software at the access level of the Metro Ethernet network. Our Service Provider Access Switches include different types of subscriber ports to fit myriad service provider needs from Copper, SFP, to WDM. It also includes Metro-specific security, QoS, and Management software features enabling service providers to deliver a secure triple play service while ensuring end to end connectivity for customers. With support for extended temperature range environments, this series allows service providers to deliver high availability with resilience.

With front panel connectors, power supply, alarm input/output interface design, the ECS3500 carrier-grade series simplifies field installation and troubleshooting for service providers to provide reliable and fault-tolerant backbones for any large network with the capacity and throughput to handle today's traffic.

I/O Modules

EM3526V-1GBGT
1000BASE Combo Module
for
ES3528
ES3528-WDM

EM3528-FAN
Fan Tray
for ES3528

EM3528-DC
DC Power Supply (48V)
for
ES3528
ES3528-WDM

EM3528-AC
AC Power Supply
(100V~240V)
for
ES3528
ES3528-WDM

New

Product Model	ECS3810-26T	ES3528	ES3528-WDM
Fixed Ports			
100BASE-T Port	24		
100BASE-TX Port		24	
100BASE-BX Port			24
Gigabit Combo (RJ-45 / SFP) Port	2	2	2
Out-of-Band Mgmt FE Port	1	1	1
Console Port	1	1	1
Expansion Modular slots		2	2
DB15 Alarm	1	1	1
Optional Modules		EM3526V-1GBGT	EM3526V-1GBGT
Physical Configuration			
Switch Functionality	Layer 2	Layer 2	Layer 2
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	32MB	16MB	16MB
SDRAM for CPU	128MB	64MB	64MB
Packet Buffer	1MB	1MB	1MB
Flexible AC/DC Dual Power Source	•	•	•
Performance			
MAC Address Table Size	16K	16K	16K
Switching Capacity	8.8Gbps	12.8Gbps	12.8Gbps
Forwarding Rate	6.52Mpps	9.5Mpps	9.5Mpps
Environment			
Fan / Fanless	Fanless	Fan	Fan
Green Saving	•		
Temperature Range	0℃ to 65℃	-20℃ to 65℃	-20℃ to 65℃
Stacking			
Software Stacking	•	•	•
Carrier Enhancements			
G.8032 (ERPS)	•		
Y.1731	•	•	•
802.3ah	•	•	•
802.1ag	•	•	•
L2 Features			
Spanning Tree	•	•	•
Link Aggregation	•	•	•
IGMP Snooping	•	•	•
Q-in-Q	•	•	•
QoS			
802.1P Priority Queues	•	•	•
DiffServ (RFC2474)	•	•	•
Security			
IEEE 802.1Q VLAN	•	•	•
DHCP Snooping	•	•	•
RADIUS	•	•	•
TACACS	•	•	•
SSH/SSL	•	•	•
Management			
Management Access Filtering	•	•	•
CLI	•	•	•
Telnet (RFC854)	•	•	•
OAM	•	•	•
Dimension			
(HxWxD) cm	44 x 4.4 x 25.2	6.7 x 44 x 25.6	6.7 x 44 x 25.6
Weight	3.08kg	5.0Kg	5.8kg

Service Provider / Wireline Carrier Solutions

Edge-Core Fiber Access Switches

ECS3500 Series
ECS3510-28F
ES3528M-SFP

OAM for Ethernet

Service provider networks are large and complex with a diverse, installed user base. To assist service providers with isolating, maintaining, and managing network traffic, OAM (Operation, Administration, and Maintenance) features are included to address their needs and assist with provsioning for robust network services.

Flexible Uplink Options

Dual Combo Gigabit Ethernet Ports allow copper or fiber connections depending on different network operational requirements. The fiber connections use SFP and can accommodate a wide range of transceivers, from 1000BASE-SX and 1000BASE-LX, to 1000BASE-LH.

Product Model	ECS3510-28F	ES3528M-SFP
Fixed Ports		
100BASE-FX Port	24	24
Gigabit Combo (RJ-45 / SFP) Port	4	2
Out-of-Band Mgmt Console Port		1
Gigabit Copper uplink Port		2
Slot for Redundant Power Supply		1
Console Port	1	1
Physical Configuration		
Switch Functionality	Layer 2	Layer 2
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	16MB	16MB
SDRAM for CPU	64MB	64MB
Packet Buffer	128KB	128KB
Performance		
MAC Address Table Size	8K	8K
Switching Capacity	12.8Gbps	12.8Gbps
Forwarding Rate	9.5Mpps	9.5Mpps
Environment		
Fan / Fanless	Fan	Fan
Temperature Range	0°C to 50°C	0°C to 50°C
Stacking		
Software Stacking	●	●
L2 Features		
Spanning Tree	●	●
Q-in-Q	●	●
Voice VLAN	●	●
VLAN Group	256 VLANs, 4K VLAN ID	256 VLANs, 4K VLAN ID
QoS		
802.1P Priority Queues	●	●
DiffServ (RFC2474)	●	●
Security		
IEEE 802.1Q VLAN	●	●
DHCP Snooping	●	●
RADIUS	●	●
TACACS	●	●
SSH/SSL	●	●
Management		
Management Access Filtering	●	●
CLI	●	●
Telnet (RFC854)	●	●
OAM	●	●
Dimension		
(HxWxD) cm	4.3x 44 x 32.4	4.3 x 44.0 x 17.1
Weight	4.2kg	4.2Kg

Service Provider / Wireline Carrier Solutions

Edge-Core Access Switches

ECS3500 Series
ES3510MA
ES3510MA–DC

Edge-Core's ECS3500 Series Layer 2 Access Switches are ideal to provide desktop Fast Ethernet connectivity and wiring closet installations for service providers, enterprise work groups, campuses and to public sectors. The ECS 3500 Series provides IP Clustering, which allows administrators to use a single IP address to manage a virtual stack of up to 36 switches. It offers enhanced QoS features such as DiffServ, Priority queue scheduling, 802.1p, and ACL to service providers.

The ECS3500 Series is packed with features in a cost-effective soution, that brings continuous availability, enhanced security, and advanced design to the network edge, while mantaining simplicity of management.

Green Friendly

New

Green Friendly

Product Model	ES3510MA	ES3510MA-DC
Fixed Ports		
100BASE-TX Port	8	8
Gigabit Combo (RJ-45 / SFP) Port	2	2
Console Port	1	1
Physical Configuration		
Switch Functionality	Layer 2	Layer 2
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	16MB	16MB
SDRAM for CPU	128MB	128MB
Packet Buffer	512KB	512KB
Power Supply	AC	DC
Performance		
MAC Address Table Size	8K	8K
Switching Capacity	5.6Gbps	5.6Gbps
Forwarding Rate	4.1Mpps	4.1Mpps
Environment		
Fan / Fanless	Fanless	Fanless
Green Saving	●	●
Temperature Range	0°C to 45°C	0°C to 45°C
Stacking		
Software Stacking	●	●
L2 Features		
Auto Edge	●	●
Loopback Detection	●	●
Q-in-Q	●	●
QoS		
802.1P Priority Queues	●	●
DiffServ (RFC2474)	●	●
Security		
IEEE 802.1Q VLAN	●	●
DHCP Snooping	●	●
RADIUS	●	●
TACACS	●	●
SSH/SSL	●	●
Management		
CLI	●	●
Web Interface	●	●
WEB Authentication	●	●
Dimension		
(HxWxD) cm	3.6 x 19.5 x 11.5	3.6 x 19.5 x 11.5
Weight	0.9Kg	0.9Kg

Edge-Core Access Switches

ECS3500 Series

ECS3510-26T
ES3528M
ES3528M V1
ES3552M

sFlow

The flow sampling (sFlow) feature embedded on this switch, together with a remote sFlow Collector, provides network administrators with an accurate, detailed and real-time overview of the types and levels of traffic present on their network.

Voice VLAN

When IP telephony is deployed in an enterprise network, it is recommended to isolate the Voice over IP (VoIP) network traffic from other data traffic. Traffic isolation can provide higher voice quality by preventing excessive packet delays, packet loss, and jitter. This is best achieved by assigning all VoIP traffic to a single Voice VLAN. The use of a Voice VLAN provides security by isolating the VoIP traffic from other data traffic. End-to-end QoS policies and high priority can be applied to the VoIP VLAN traffic across the network, guaranteeing the bandwidth it needs. The VLAN isolation also protects against disruptive broadcast and multicast traffic that can seriously affect voice quality.

Product Model	ECS3510-26T	ES3528M	ES3528M V1	ES3552M
Fixed Ports				
100BASE-TX Port	24	24	24	48
Gigabit Combo (RJ-45 / SFP) Port	2	4	4	4
Console Port	1	1	1	1
Physical Configuration				
Switch Functionality	Layer 2	Layer 2	Layer 2	Layer 2
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	32MB	16MB	16MB	16MB
SDRAM for CPU	128MB	64MB	64MB	64MB
Packet Buffer	512KB	128KB	128KB	128KB
Performance				
MAC Address Table Size	8K	8K	8K	8K
Switching Capacity	8.8Gbps	12.8Gbps	12.8Gbps	17.6Gbps
Forwarding Rate	6.5Mpps	9.5Mpps	9.5Mpps	9.5Mpps
Environment				
Fan / Fanless	Fanless	Fanless	Fanless	Fanless
Temperature Range	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃
Stacking				
Software Stacking	●	●	●	●
L2 Features				
IEEE 802.1Q VLAN	256	256	4K	256
Auto Edge	●	●	●	●
Loopback Detection	●	●	●	●
Q-in-Q	●	●	●	●
QoS				
802.1P Priority Queues	●	●	●	●
DiffServ (RFC2474)	●	●	●	●
Security				
IEEE 802.1Q VLAN	●	●	●	●
DHCP Snooping	●	●	●	●
Guest VLAN	●	●	●	●
RADIUS	●	●	●	●
TACACS	●	●	●	●
SSH/SSL	●	●	●	●
Management				
CLI	●	●	●	●
Web Interface	●	●	●	●
sFlow		●	●	●
Loop Detection	●	●	●	●
Dimension				
(HxWxD) cm	4.3 x 44 x 23	4.3 x 44 x 17.1	4.3 x 44 x 17.1	4.3 x 44 x 23
Weight	2.7kg	2kg	2kg	2.9kg

Service Provider / Wireline Carrier Solutions

Edge-Core Carrier Access CPEs

EC3800 Series

EC3805
EC3805F
EC3802-WDM

Edge-Core Customer Premises Equipment (CPE) and Access devices are hardware located at the home or business of a customer and connected with a carrier's telecommunication channel(s) at the demarcation point (demarc). The demarc is a point established in a building, home, or complex to separate customer equipment from service provider/carrier equipment.

Edge-Core's solutions include digital subscriber line (DSL) or other broadband Internet routers, or other Edge-Core customized hardware used by a particular service provider/wireline/wireless carrier.

The Edge-Core 3800 Series of Access/CPE devices include the EC3805, EC3805F, and EC3802-WDM. The EC3805 and EC3805F differ only in their physical (PHY) layer connections: copper and fiber respectively, while the EC3802-WDM is a fiber CPE device. EC3805 is best suited for Ethernet to the Home (ETTH) or Ethernet to the Building (ETTB) deployments, within 100 meters. The result is the minimum cost to deliver high performance triple play services for both home and business customers. EC3805F and EC3802-WDM are ideal for Fiber to the Home (FTTH) or Fiber to the Building (FTTB) deployments.

Product Model	EC3805	EC3805F	EC3802-WDM
Fixed Ports			
100BASE-TX LAN Port	4	4	1
100BASE-TX WAN Port	1		
100BASE-BX WAN Port		1	1
Physical Configuration			
Functionality	Access Gateway	Access Gateway	Access CPE
Form Factor	Layer 2	Layer 2	Layer 2
Flash Memory	2MB	2MB	2MB
SDRAM for CPU	256K	256K	256K
Packet Buffer	96KB	96KB	96KB
Performance			
MAC Address Table Size	2K	2K	2K
Environment			
Power Consumption	10W (Max)	10W (Max)	3W (Max)
Temperature Range	0℃ to 45℃	0℃ to 45℃	0℃ to 40℃
L2 Features			
IGMP Snooping	●	●	
DHCP Client / Server	●	●	
Port Forwarding	●	●	
SNTP	●	●	
Port-based VLAN	●	●	
IEEE 802,3x Flow Control	●	●	●
Security			
IEEE 802.1Q VLAN	●	●	
WAN Destination IP Filter	●	●	
LAN MAC Filter	●	●	
Management			
Web-based Management	●	●	●
SNMP v2c	●	●	
NAT Support	●	●	
IEEE 802.3ah OAM			●
Dimension			
(HxWxD) cm	14.7 x 9.4 x 3	14.7 x 9.4 x 3	3.5 x 11 x 18
Weight	280g	280g	500g

Enterprise Solutions

Edge-Core Networks provides a full range of managed switches to fulfill different deployment requirements, incuding a complete set of advanced software features, powered by EdgeCOS, that easily satisfy the demands of enterprises and SMBs everywhere.

In addition to having a powerful L2/L3 feature set, EdgeCOS places heavy emphasis on scalability, reliability, and flexibility, so your network can grow with your organization.

Hardware Stacking (e.g. ECS4610-26T/ECS4610-50T)

Up to 8 Edge-Core switches may be stacked, thus increasing port density up to 384 Gigabit ports. In addition, cross stack trunking can be implemented to further expand network capacity.

IPv6 (e.g. Core Chassis Switch & ECS4610-26T/ ECS4610-50T)

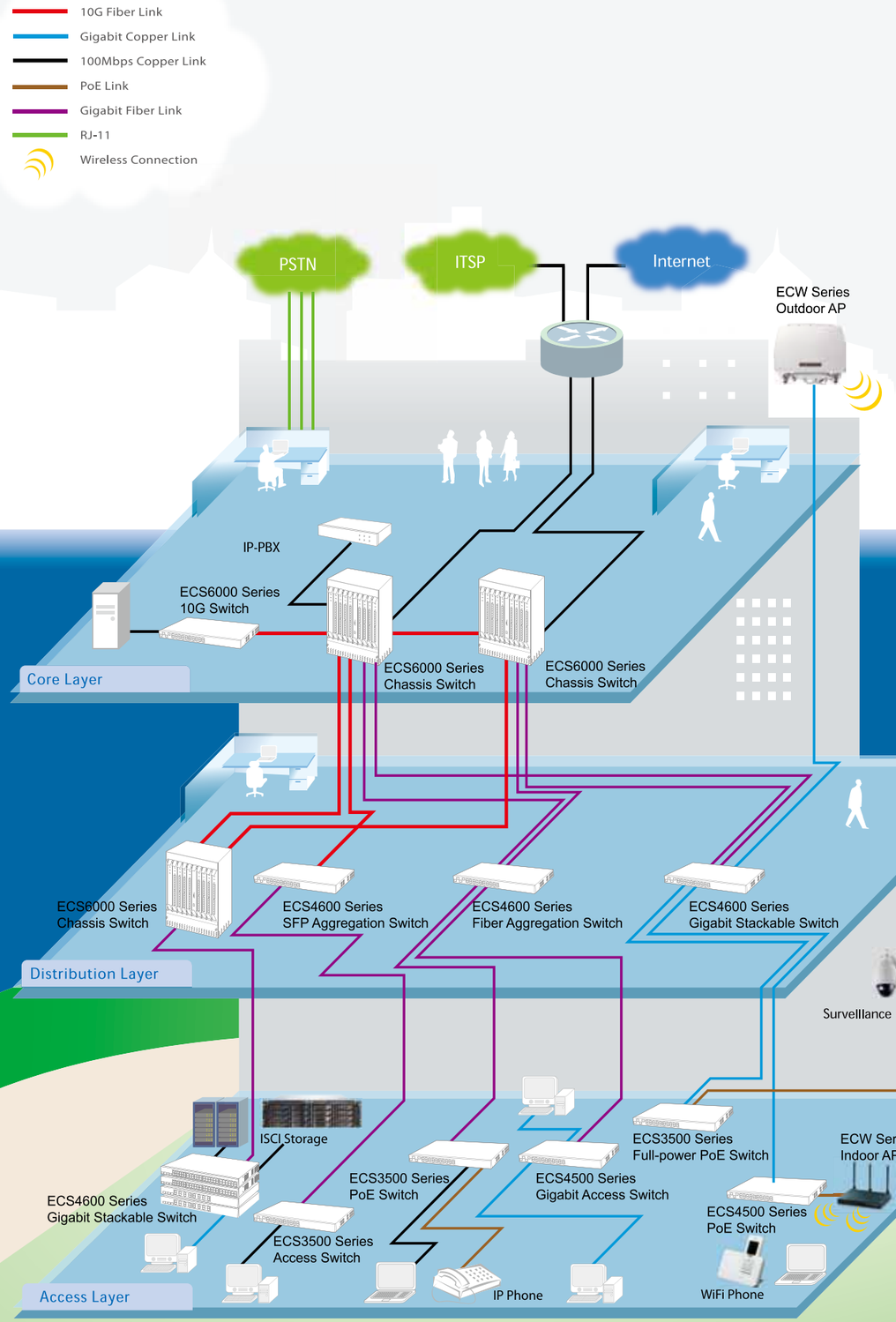
All new Edge-Core switches support Internet Protocol version 6 (IPv6), a suite of protocols and standards developed by the Internet Engineering Task Force (IETF) to replace IPv4's impending problem of IP address exhaustion. IPv6-compliant switches offer the following benefits:

- Dual-stacking, allowing IPv4 and IPv6 to co-exist in the same device and network
- Tunneling, allowing an IPv6 packets to traverse through legacy IPv4 networks
- Sophisticated routing, supporting RIPng and OSPFv3

The Cloud Connection (e.g. ECS4610-26T/ ECS4610-50T)

A number of select Edge-Core models offer 10Gigbit Ethernet uplinks. Our switches offer the following features, allowing effortless connection with data center servers to enable cloud computing applications to run on the network:

- Two types of 10G connection types are supported through the optional 10G Module, XFP and 10GBase-T.
- Large packet buffer, minimizing packet loss in the switch fabric
- High performance and low latency



Core Layer Network

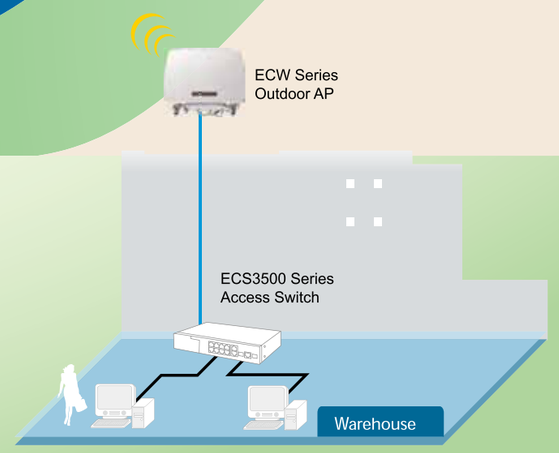
* Redundant and resilient design ensures 24/7 operation for data center networks
* Robust L3 routing features (e.g. OSPF and BGP4) to meet a variety of demanding environments.
* Support for industry standard protocols offers maximum interoperability flexibility with previously-owned equipment.
* Advanced QoS to satisfy different levels of requirements and applications.
* A comprehensive security solution protects the core network and data security by use of different types of access permissions.

Aggregation/Distribution Layer Network

* Flexible port interface options (copper/fiber) enable a single device to suit more than one environment
* High reliability and resilient routing features allow fast recovery and avoidance of switch downtime due to outages in service.
* Four 10G ports provide non-blocking traffic forwarding.
* Ease of management for up to 36 access layer switches by a single IP address.
* Superior QoS and security design satisfy future multi-play applications.

Access Layer Network

* IPv6 support future-proofs your enterprise data network
* Gigabit Ethernet provides the higher bandwidth necessary to meet new and evolving network demands (e.g. Gigabit to the Desktop)
* Comprehensive security provides first-line protection for critical information and keeps unauthorized users off the network
* Superior QoS via granular rate control and a range of differential service features ensure traffic is properly classified and prioritized for multiple applications.



Data Center Switches & LAN Core Switches

L2 10G Ethernet Switch

ECS5510-48S

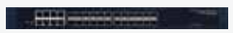
Chassis & I/0 Module

ES4704BD

ES4710BD

4600 Series L3 SFP Metro Aggregation Switches

ES4612



ES4624-SFP

ES4626-SFP

ECS4610-24F

4600 Series L3 Gigabit Ethernet Stackable Switches

ECS4610-26T

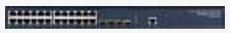
ECS4610-50T

3600 Series L3 Fast Ethernet Standalone Switches

New

ECS3610-28T

4500/4800 Series L2/L4 Gigabit Ethernet Standalone Switches



ES4524D

Green Friendly

ES4528V

New

ECS4810-28TS

ES4548D

3500 Series L2/L4 Fast Ethernet Standalone Switches

Green Friendly

ES3510MA

Green Friendly

ES3510MA-DC

ES3528M

ES3528M V1

ES3552M

3500/4500 Series L2/L4 PoE Switches

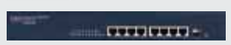
ES3528M-PoE

ES3528MF-PoE

ES4524M-PoE

4300 Series Web Smart Switches

Green Friendly



ES4308-PoE

Green Friendly New

ECS4310-18T

Green Friendly

ES4524

Green Friendly

ECS4310-26T

Edge-Core Data Center Switches

ECS6000 Series

ECS5510-48S
ES4704BD
ES4710BD

The ECS6000 Series of Ethernet switches provides scalable, compact, high-performance platforms for supporting high-density 10 Gigabit per second (Gps) data center, campus, and service provider deployments. Products in this series include the ES4704 and ES4710 chassis switches plus line cards, and the ECS5510-48S 10 Gigabit switch. Featuring up to 48 10Gigabit SFP Ports, these switches deliver full Layer 2 and Layer 3 connectivity to networked devices such as servers, Ethernet attached storage devices, cloud computing modules, and other switches.

Like all Edge-Core switches, the ECS6000 Series leverages proven Edge-Core hardware technology, bringing robust enterprise and carrier-class performance and reliability to demanding business/government deployments.

Product Model	ECS5510-48S	ES4704BD	ES4710BD
Fixed Ports			
10G SFP Port	48	Line Card	Line Card
RJ-45 Management Port	1	1	1
RJ45 Console Port	1	1	1
Out-of-Band Mgmt FE Port	1	1	1
Out-of-Band Mgmt Console Port		1	1
PSU slot for removable Power supply	1	1	1
Chassis Slot	1	4	10
Physical Configuration			
Functionality	Layer 2	Layer 3	Layer 3
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	64MB	32MB	32MB
SDRAM for CPU	512MB	128MB	128MB
Packet Buffer	4MB	Line-card dependent	Line-card dependent
Performance			
MAC Address Table Size	32K	16K	16K
Switching Capacity	960Gbps	160Gbps	320Gbps
Forwarding Rate	714Mpps	59.5.Mpps	238Mpps
Environment			
Fan / Fanless	Fan	Fan	Fan
Temperature Range	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃
Stacking			
Software Stacking		•	•
L2 Features			
Q-in-Q	•	•	•
Voice VLAN		•	•
MAC Based VLAN	•	•	•
VLAN Group	4K	4K	4K
Routing			
IPv6 Support		•	•
OSPF		•	•
DVMRP		•	•
PIM-DM/SM		•	•
VRRP		•	•
QoS			
802.1P Priority Queues	•	•	•
DiffServ (RFC2474)	•	•	•
Security			
IP Source Guard	•	•	•
RADIUS	•	•	•
TACACS	•	•	•
DHCP Snooping	•	•	•
SSH/SSL	•	•	•
Management			
CLI	•	•	•
Telnet (RFC854)	•	•	•
sFlow	•	•	•
Data Center Features			
802.1Qbb Priority Flow Control	•		
802.1Qau Congestion Notification	•		
802.1Qaz Enhanced Transmission Selection	•		
802.1az DCBX	•		
FCoE ACL and FIP snooping	•		
Dimension			
(HxWxD) cm	4.3 x 44 x 59	26.6 x 44.5 x 42.1	79.7 x 43.6 x 47.8
Weight	10kg	30kg	65kg

Edge-Core ECS6000 Series Modules

4-Slot L3 Chassis Switch
ES4704BD

IPv6 | 4-Slot | 10GE | Routing | L3 Multicast | QoS | Hot Swappable | Dual Power Supply | Redundancy

4 Chassis slots with max.
160Gbps non-blocking switching fabric

10-Slot L3 Chassis Switch
ES4710BD

IPv6 | 10-Slot | 10GE | Routing | L3 Multicast | QoS | Hot Swappable | Triple Power Supply | Redundancy

10 Chassis slots with max.
320Gbps non-blocking switching fabric

Agent

EM4704BD-M12GT12GC1XG
L3 Management Module
with 12 x 1000BASE-X SFP
+ 12 x 1000BASE-T
+ 1 x 10G XFP ports

EM4704BD-M44GT
L3 Management Module with
44 x 1000BASE-T ports

Accessory

EM4704BD-AC
110/220V AC
Power Supply

Agent

EM4710BD-Agent
L3 Management Module

New

EM4710BD-Agent 2
L3 Management Module
MPLS Support

Accessory

EM4710BD-AC
110/220V
AC Power Supply

I/O Modules

EM4700BD-12GT12GC
12 x 1000BASE-T
+ 12 x Gigabit
Combo(RJ-45 / SFP) ports

EM4700BD-12GT12GC2XG
12 x 1000BASE-T +12 x Gigabit
Combo (RJ-45 / SFP)
+ 2 x 10G XFP ports

EM4700BD-4XG-XFP
4 x 10G XFP Ports

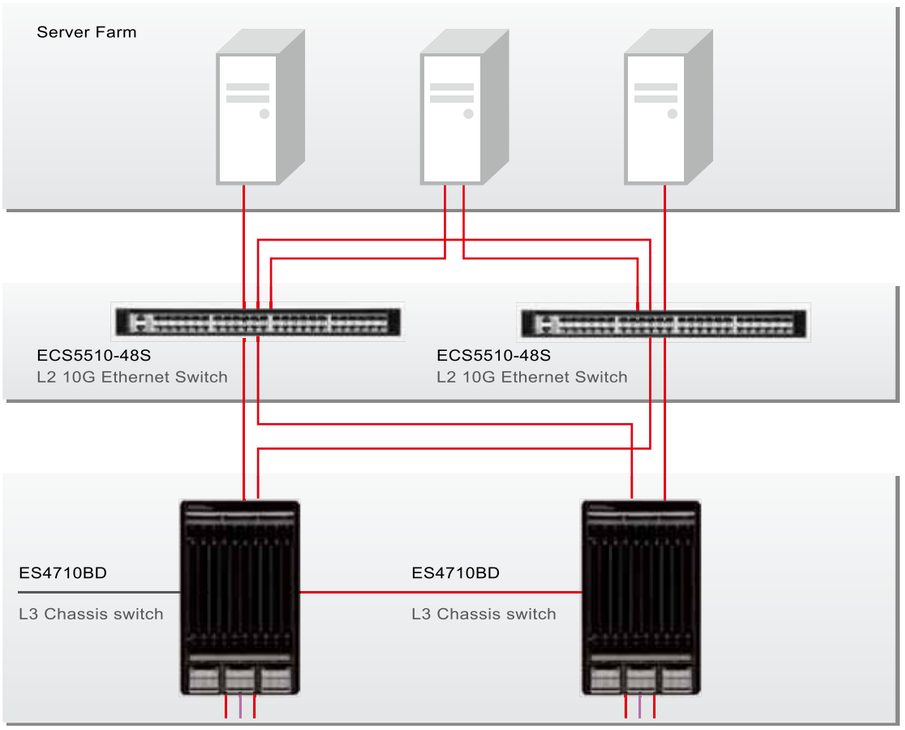
New

EM4700BD-24GX12GT2XFP
24 x 1000BASE-X SFP ports
+ 12 x 1000BASE-T
+ 2 x 10G XFP ports

EM4700BD-48GX
48 x 1000BASE-X SFP
ports

New

EM4700BD-48GT
48 x 1000BASE-T ports



10G Fiber Link

Gigabit Fiber Link

L3 Fast Ethernet LAN Distribution Switches

ECS3600 Series

ECS3610-28T

The ECS3600 Series switches are L3 Fast Ethernet products which meet the requirements of security and intelligent networks for education institutes, governments, carriers, enterprises, and industries. Versatility is a key attribute; they can also be access devices for large networks, as well as the distribution layer devices for buildings, or core switches for small and medium networks.

ECS3600 Series Switches are an ideal workgroup layer 3 switch, grouping users based on department, reducing traffic in separate departments, while still routing unicast traffic between different VLANs or subnets. Using IP Clustering for a virtual stack of up to 24 switches, the entire stack can be managed as a single logical entity with a single IP address. This switch series provides enhanced security and advanced QoS to the network edge, while maintaining simplicity of management.

New

Product Model	ECS3610-28T
Fixed Ports	
100BASE-T Port	24
Gigabit Combo (RJ-45 / SFP) Port	2
RJ-45 Console Port	1
SFP Port	2
Physical Configuration	
Switch Functionality	Layer 3
Form Factor	Desktop / Rackmountable
Flash Memory	64MB
SDRAM for CPU	256MB
Packet Buffer	1MB
Performance	
MAC Address Table Size	16K
Switching Capacity	12.8Gbps
Forwarding Rate	9.5Mpps
Environment	
Fan / Fanless	Fan
Temperature Range	0℃ to 45℃
Stacking	
Software Stacking	●
L2 Features	
Q-in-Q	●
MAC Based VLAN	●
VLAN Group	4K
Routing	
DVMRP	
PIM-DM	●
PIM-SM	●
VRRP	●
QoS	
802.1P Priority Queues	●
DiffServ (RFC2474)	●
Security	
IEEE 802.1Q VLAN	●
DHCP Snooping	●
RADIUS	●
TACACS	●
Management	
CLI	●
Web Interface	●
Option 82	
Dimension	
(HxWxD) cm	4.4 x 44 x 23
Weight	1.96kg

L3 Gigabit Ethernet LAN Distribution Switches

ECS4600 Series

ECS4610-26T
ECS4610-50T

The ECS4600 Series is ideal for service provider edge aggregation, enterprise wiring closets, data center aggregation, and network core deployment. It provides high performance, resilient stacking, wire speed L2 switching and L3 routing, comprehensive QoS, and advanced security to deliver the scalability and resiliency to increase your company's productivity while reducing operational cost.

The ECS4610 switches provide two stacking ports for hardware stacking, with up to 320Gbps throughput. Any combination of ECS4610 Series units can be stacked up to 8 units high to a maximum of 400 logical ports. The stack acts as a single logical switching unit that is managed by a master switch, elected from one of the member switches. The master switch automatically creates and updates all the switching and optional routing tables. A working logical switch can add new members or delete old ones without service interruption, simplifying network management tasks.

I/O Modules

EM4626H-XG-XFP
10G uplink optional module

Product Model	ECS4610-26T	ECS4610-50T
Fixed Ports		
1000BASE-T Port	20	44
Gigabit Combo (RJ-45 / SFP) Port	4	4
RJ45 Console Port	1	1
Modular Uplinks	2	2
Physical Configuration		
Switch Functionality	Layer 3	Layer 3
Standalone / Stackable	Stackable	Stackable
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	64MB	64MB
SDRAM for CPU	256MB	256MB
Packet Buffer	2MB	2MB
Performance		
MAC Address Table Size	16K	16K
Switching Capacity	128Gbps	176Gbps
Forwarding Rate	95.2Mpps	131Mpps
Environment		
Fan / Fanless	Fan	Fan
Temperature Range	0℃ to 50℃	0℃ to 50℃
Stacking		
Software Stacking		
Resilient Stacking	●	●
No. of Units Spported in a Stack	8	8
Stacking bandwidth	2 X 12 Gbps up to 8 units	2 X 12 Gbps up to 8 units
Routing		
IPv4/IPv6 Unicast/Multicast Routing	●	●
OSPF	●	●
DVMRP		
PIM-DM	●	●
PIM-SM	●	●
VRRP	●	●
L2 Features		
Q-in-Q	●	●
Voice VLAN	●	●
MAC Based VLAN	●	●
VLAN Group	4K	4K
QoS		
802.1P Priority Queues	●	●
DiffServ (RFC2474)	●	●
Security		
IEEE 802.1Q VLAN	●	●
DHCP Snooping	●	●
RADIUS	●	●
TACACS	●	●
SSH/SSL	●	●
Management		
CLI	●	●
Web Interface	●	●
sFlow	●	●
Dimension		
(HxWxD) cm	4.4 x 44 41.5	4.4 x 44 41.5
Weight	5.7kg	6.1kg

L2 Gigabit Ethernet LAN Edge / Access Switch

ECS4500 Series

ES4528V
ES4524D
ES4548D
ECS4810-28TS

The ECS4500 Series is ideal for high performance server aggregations, such as enterprise data centers. Key deployment areas are connecting high-end or network attached file servers over copper ports together with high speed workgroup backbone upgrades and Gigabit to the desktop for power users. The entire logical stack can be managed as a single entity with a single IP address, offering advanced administration through a user-friendly browser interface. Sophisticated QoS and VLAN support provide extensible scalability for mission-critical applications. Switching ports can be aggregated to create a high bandwidth pipe to the network backbone. Comprehensive network management functions such as STP/RSTP/MSTP protocols for standard bridging, together with SNMP, RMON and advanced security are fully supported.

Green Friendly

New

Product Model	ES4528V	ES4524D	ES4548D	ECS4810-28TS
Fixed Ports				
1000BASE-X Port	24	20	44	24
Gigabit Combo (RJ-45 / SFP) Port	4	4	4	4
RJ45 Console Port	1	1	1	1
Redundant Power Supply		●	●	
Physical Configuration				
Switch Functionality	Layer 2	Layer 2	Layer 2	Layer 2
Standalone / Stackable	Standalone	Standalone	Standalone	Stackable
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	8MB	16MB	16MB	8MB
SDRAM for CPU	32MB	64MB	64MB	32MB
Packet Buffer	64KB	0.75MB	0.75MB	64KB
Performance				
MAC Address Table Size	8K	8K	8K	8K
Switching Capacity	56Gbps	48Gbps	96Gbps	56Gbps
Forwarding Rate	41.7Mpps	35.7Mpps	71.5Mpps	41.7pps
Environment				
Fan / Fanless	Fan	Fan	Fan	Fan
Green Saving	●			
Temperature Range	0℃ to 45℃	0℃ to 50℃	0℃ to 50℃	-20℃ to 65℃
Stacking				
Software Stacking		●	●	●
L2 Features				
Spanning Tree	●	●	●	●
Q-in-Q	●			●
MAC Based VLAN				
VLAN Group	256 VLANs ; 4K VLAN ID	256 VLANs ; 4K VLAN ID	256 VLANs ; 4K VLAN ID	256 VLANs ; 4K VLAN ID
QoS				
802.1P Priority Queues	●	●	●	●
DiffServ (RFC2474)	●	●	●	●
Security				
IEEE 802.1Q VLAN	●	●	●	●
DHCP Snooping	●			●
RADIUS	●	●	●	●
TACACS	●			●
SSH/SSL	●	●	●	●
Management				
CLI	●	●	●	●
Web Interface	●	●	●	●
Dimension				
(HxWxD) cm	4.3 x 44 x 17.2	4.4 x 44 x 33.1	4.4 x 44 x 33.1	4.3 x 44 x 22
Weight	2.22kg	3.72kg	4.34kg	2.22kg

Edge-Core L2 PoE Switches

PoE Switches
ES3528M-PoE
ES3528MF-PoE
ES4524M-PoE

Power Over Ethernet Switches

Edge-Core Managed PoE switches are ideal for desktop Gigabit Ethernet connectivity, for powering devices such as IP phones, wireless access points, surveillance cameras, etc, and for delivering data and power simultaneously over existing CAT 5 cables.

PoE functionality delivers up to 7.5W or 15.4W maximum per port, providing a robust solution for VoIP/wireless or other devices supporting PoE IEEE 802.3af. The ES3528MFF-PoE is our first model offering the PoE+ feature, which is an extension to the IEEE 802.3af standard that delivers up to 15.4 Watts per port. The PoE+ feature is designed to meet immediate customer needs for Power over Ethernet in excess of 15.4W per port,enabling them to support new technologies that require it, such as IEEE 802.11n wireless infrastructure.

Product Model	ES3528M-PoE	ES3528MF-PoE	ES4524M-PoE
Fixed Ports			
100BASE-TX Port	24	24	22
1000BASE-T Port	2	2	-
Gigabit Combo (RJ-45 / SFP) Port	2	2	2
Out-of-Band Mgmt Console Port	1	1	1
RJ45 Console Port	1	1	1
Physical Configuration			
Switch Functionality	Layer 2	Layer 2	Layer 2
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	8MB	16MB	8MB
SDRAM	64MB	64MB	64MB
Packet Buffer	128KB	128KB	384KB
Performance			
MAC Address Table Size	8K	8K	8K
Switching Capacity	12.8Gbps	12.8Gbps	52 Gbps
Forwarding Rate	9.5Mpps	9.5Mpps	38.7 Mpps
Power Over Ethernet			
IEEE 802.3af Compliant	●	●	●
Full Power		●	
Max. Power Output Per Port	15.4W for 12 Ports or 7.5W for 24 Ports	15.4W for 24 Ports	7.5W for 24 Ports
Power Transmitting Ports	●	●	GE Ports only
PoE Power	180W	360W	180W
Environment			
Fan / Fanless	Fan	Fan	Fan
Temperature Range	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃
Stacking			
Software Stacking	●	●	●
L2 Features			
Spanning Tree	●	●	●
Link Aggregation	●	●	●
IGMP Snooping	v1,v2,v3	v1,v2,v3	v1,v2,v3
Q-in-Q	●	●	●
QoS			
802.1P Priority Queues	●	●	●
DiffServ (RFC2474)	●	●	●
Security			
IEEE 802.1Q VLAN	●	●	●
DHCP Snooping	●	●	●
Guest VLAN	●	●	●
RADIUS	●	●	●
TACACS	●	●	●
SSH/SSL	●	●	●
Management			
Management Access Filtering	●	●	
CLI	●	●	●
Telnet (RFC854)	●	●	●
sFlow	●	●	
Dimension			
(HxWxD) cm	4.3 x 44 x 33 cm	4.3 x 44 x 33 cm	4.3 x 43.8 x 32.8 cm
Weight	4.13kg	4.13kg	5.8kg

Edge-Core L2 Web Smart Switches

ECS4300 Series
ES4308-PoE
ECS4310-18T
ES4324
ECS4310-26T

The ECS4300 Switch Series enables networks of all sizes to introduce Gigabit Ethernet with management features targeted to meet the needs of the SMB network, and Gigabit to the desktop for power users. ECS4300 series products provide a flexible web-based management interface enabling easy configuration of switch features, port settings including security, QoS with 8 queues, link aggregation, and VLANs. These features increase throughput and flexibility. Security is extremely important in next generation networks; this switch has added security features harden your network against intruders.

ECS4300 series switches are packed with features and offer a cost-effective solution that brings continuous availability, QoS priority queuing with classification, and prioritization to your network.

Product Model	ES4308-PoE	ECS4310-18T	ES4324	ECS4310-26T
Fixed Ports				
1000BASE-T Port	7	16	20	24
1000BASE-X Fiber Slot		2		2
Gigabit Combo (RJ-45 / SFP) Port	1		4	
Physical Configuration				
Switch Functionality	Web Smart	Web Smart	Web Smart	Web Smart
Form Factor	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable	Desktop / Rackmountable
Flash Memory	2MB	4MB	2MB	4MB
SDRAM for CPU	256KB	16MB	64KB	16MB
Packet Buffer	144KB	448KB	400KB	3.5MB
Performance				
MAC Address Table Size	8K	16K	8K	16K
Switching Capacity	16Gbps	36Gbps	48Gbps	52Gbps
Forwarding Rate	11.9Mpps	26.8Mpps	35.7Mpps	38.7Mpps
Environment				
Fan / Fanless	Fan	Fan	Fan	Fan
Green Saving	●		●	
EEE (Energy Efficient Ethernet)		●		●
Temperature Range	0℃ to 45℃	0℃ to 50℃	0℃ to 40℃	0℃ to 50℃
L2 Features				
Spanning Tree (STP / RSTP)	●	●	●	●
Private VLAN		●		●
VLAN Group	64	256	256	256
Q-in-Q			●	
QoS				
802.1P Priority Queues	●	●	●	●
DiffServ (RFC2474)			●	
Security				
IEEE 802.1Q VLAN	●	●	●	●
DHCP Snooping		●		●
IEEE 802.1X Port-based access control	●	●		●
Management				
IPv6 Management		●		●
CLI			●	
Web Interface	●	●	●	●
Port Mirroring	●		●	
LLDP	●	●		●
Dimension				
(HxWxD) cm	4.4 x 33 x 20.3	4.3 x 44 x 17.2	4.4 x 44 x 17	4.3 x 44 x 17.2
Weight	1.8kg	1.98kg	2.9kg	1.98kg

Edge-Core Redundant Power Supplies

RPS Series

RPS600WA

The RPS600WA is a Redundant Power Supply that protects your network against unforeseen events by supplying power to devices the instant they begin to fail and increases reliability for converged data, voice, and video networks.

Each RPS600WA supplies a maximum capacity of 600 Watts to four switches, making it ideally suited to support a number of Edge-Core switches.

Additional features include:

- Thermal overload protection that prevents the RPS from overheating.
- Over-voltage protection shuts down an output channel if the voltage exceeds a preset threshold. (12.3 V)
- Over-current protection shuts down the RPS if the output load exceeds a preset threshold. (14.5 A)
- Short-circuit protection prevents the RPS from being damaged from a short circuit on any output channel.

Product Model	RPS600WA
Fixed Ports	
Redundant Power Supply Port	4
Physical Configuration	
Functionality	Redundant Power Supply
Form Factor	Desktop / Rackmountable
Supported Products	ES4524D/ ES4548D/ ES4612/ ECS4610-26T/ ECS4610-50T/ ECS3610-28T
Performance	
Power Delivery	150W / 12V per Port
Hot Insertion	•
Dedicated LED indication	•
Device Protection	
Thermal Protection	•
Over-voltage protection	•
Over-current protection	•
Short-circuit protection	•
Environment	
Fan / Fanless	Fan
Temperature Range	0°C to 45°C
Dimension	
(HxWxD) cm	4.4 x 44 x 32.5
Weight	8.66kg

Pluggable Optics

SFP Transceiver

Fast Ethernet Transceiver

Model	Connect Speed	Wavelength (RX)	Wavelength (TX)	Distance	Connector	Fiber Mode	Devices Supported
ET3203-BX20	100Mbps	1550nm	1310nm	20km	LC	Single-mode	ES3528M/ES3552M/
ET3203-BX20D	100Mbps	1310nm	1550nm	20km	LC	Single-mode	ES3528M-SFP

Gigabit Ethernet Transceiver

Model	Connect Speed	Wavelength	Distance	Connector	Fiber Mode	Devices Supported
ET4201-SX	1000Mbps	850nm	500m	LC	Multi-mode Fiber	ES4612 / ES4624-SFP / ES4626-SFP / ES3528 /ES3528-WDM / ES3528M-SFP / ES4626 / ES4650 / ECS4610-26T / ECS4610-50T / ES4524D / ES4548D / ES3528M / ES3552M/ ES3510 / ES3526XA V2 / ES3510MA / ES3528-PoE / ES3528MF-PoE / ES4528V / ES4524M-PoE / ES4324 / ES4308-PoE
ET4201-LX	1000Mbps	1310nm	10km	LC	Single-mode Fiber	
ET4201-LHX	1000Mbps	1310nm	40km	LC	Single-mode Fiber	
ET4201-ZX	1000Mbps	1550nm	80km	LC	Single-mode Fiber	
ET4201-RJ45	1000Mbps	--	100m	RJ45	---	

Gigabit Ethernet Transceiver

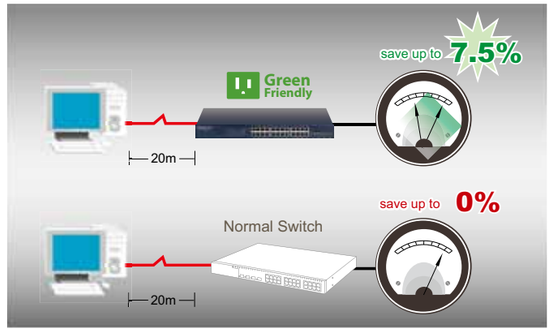
Model	Connect Speed	Wavelength (RX)	Wavelength (TX)	Distance	Connector	Fiber Mode	Devices Supported
ET4203-BX20 (BiDi 1314)	1000Mbps	1490nm	1310nm	20km	LC	Single-mode	ES4612 / ES4624-SFP / ES4626-SFP / ES3528 /ES3528-WDM / ES3528M-SFP / ES4626 / ES4650 / ECS4610-26T / ECS4610-50T ES4548D / ES3528M / ES3552M/ ES3510 / ES3526XA V2 / ES4528V / ES4524M-PoE / ES3510MA / ES4324 / ES4308-PoE
ET4203-BX20D (BiDi 1315)	1000Mbps	1310nm	1490nm	20km	LC	Single-mode	
ET4204-BX10 (BiDi 1315)	1000Mbps	1550nm	1310nm	10km	LC	Single-mode	
ET4204-BX10D (BiDi 1315)	1000Mbps	1310nm	1550nm	10km	LC	Single-mode	

XFP Transceiver

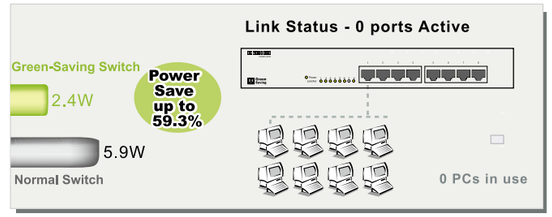
10G XFP Transceiver

Model	Connect Speed	Wavelength	Distance	Connector	Fiber Mode	Devices Supported
ET5302-SR	10Gbps	850nm	300m	LC	Multi-mode Fiber	ES4626-SFP /
ET5302-LR	10Gbps	1310nm	10km	LC	Single-mode Fiber	ES4626 / ES4650 / ES4626-SFP /
ET5302-ER	10Gbps	1550nm	40km	LC	Single-mode Fiber	ECS4610-26T / ECS4610-50T
ET5402-SR	10Gbps	850nm	300m	LC	Multi-mode Fiber	ECS5510-48S
ET5402-LR	10Gbps	1310nm	10km	LC	Single-mode Fiber	
ET5402-ER	10Gbps	1550nm	40km	LC	Single-mode Fiber	

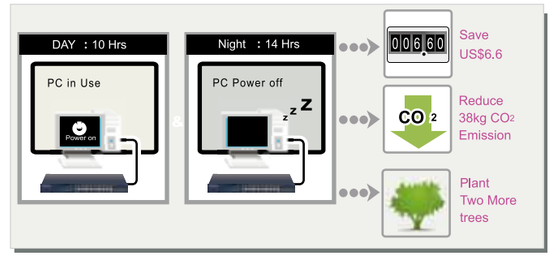
Edge-Core Green Friendly Technology™



Cable Length Power Saving:
Edge-Core Green Friendly technology can actively detect the presence of a shorter ethernet cable. Thus determining the appropriate port power level based on cable length so there will be less power consumed as the link distance shortens. If the cable length is less than 20 meters (rather than the 100 meters of cable length specified by IEEE standards), an Edge-Core Green Friendly Switch can save up to 7.5% of the power budget.



Active Port Power Saving:
Edge-Core Green Friendly technology can automatically detect the link status and remove power from given port during periods of no link activity (port is disconnected or a network device is turned off). After detecting an incoming signal, it wakes up from power saving mode and operates in normal mode. If network devices connected to the switch are turned off, an **Edge-Core Green Friendly Switch can save up to 59.3% of the power budget.** Even under full traffic load (all network devices up and running), Edge-Core Green Friendly Switches continue to save up to 8% of the power budget.



Cut Your Operating Expenses and Save Mother Earth with Edge-Core Green Friendly Switches
In a standard office scenario in which PCs are used for 10 hours a day and powered off 14 hours a day, and connected to a switch using 20-meter cables, each Edge-Core **Green Friendly Switch can save up to 34.6% of power,** saving electricity costs up to US$6.60 per day. Further, in terms of contribution to the earth it **reduces up to 38kg of CO2 emissions which equals the planting of two more trees for mother earth**.
* Power savings may vary depending on network devices or PCs used, and on various conditions.

WEEE:
All Edge-Core products are in full compliance with WEEE, the Waste Electrical and Electronic Equipment Directive, setting collection, recycling and recovery targets for all types of electrical goods.
The processing of electronic waste in developing countries causes serious health and pollution problems because electronic equipment contains very serious contaminants such as lead, cadmium, beryllium, and brominated flame retardants. Even in developed countries recycling and disposal of e-waste involves significant risk to workers and communities and great care must be taken to avoid unsafe exposure in recycling operations to avoid leaching of material, such as heavy metals from landfills and incinerator ashes.

Objectives of WEEE Compliance:
Prevent electrical and electronic equipment waste
Increase re-use, recycling, and other forms of recovery
Improve the environmental performance of all sectors in the supply chain

Green Supply Chain:
Edge-Core has expanded its care for mother earth to its whole supply chain system, from manufacturer management and certification compliance to packaging and brochure printing.
Manufacture management: vendors are required to maintain strict standards
Green packaging design reduces use of raw materials
Use of green materials including recycled paper for outer boxes and interior packaging
Use of recycled paper and environmental printing ink for company and product brochures

Green Office Policy:
Edge-Core began at its headquarters to implement Green office policy to reduce energy consumption, increase waste recycling, and to encourage green practices that will reduce the carbon footprint.
Edge-Core supports paper recycling and using double-sided paper for printers and fax machines.
The Company practices strict management and weekly monitoring of office lighting and computer usage.
The use of reusable utensils in the company cafeteria is strongly encouraged.
Edge-Core favors employees who choose cycling instead of using motor vehicles; shower rooms are available for cyclists.

Green Friendly RoHS WEEE declaration

Network Management System

ECView Pro

Effective and far-sighted management of enterprise network infrastructure is a requirement for business viability today. Because of the increasingly critical role IT plays in business success, the enterprise/business owner must carefully manage investments in network infrastructure to ensure optimal return on investment and total cost of ownership.

Network management systems have come to play a key part in maximizing the business and operational benefits of an enterprise network. The ECView Pro product suite, built on the powerful ECView Platform, provides a sophisticated plug-in architecture that ensures transparent integration of all components and products.

The ECView Pro Network Management System (NMS) meets current and future technology challenges with business practicality. ECView Pro NMS provides a single point to manage your entire enterprise network, together wiith unlimited and customizable reporting capability. Positioned for future growth, ECView Pro NMS is extendable to allow management of other enterprise functions, such as traffic analysis, wireless management, and security. It is designed

User Friendly Interface

ECView Pro NMS features a user-friendly interface for managing Edge-Core and third party network devices. It provides all the tools which users need to effectively manage nearly any kind of network infrastructure. With ECView Pro, network/system managers can readily monitor the traffic load throughout the network and make changes required to avoid a major crisis before it happens. ECView Pro NMS is designed around an event-driven architecture, which allows users to define event-handling routines that can automatically manage a wide variety of network tasks.

Network Topology Mapping

ECView Pro NMS scans the network and automatically generates a topology map so the administrator has a complete view of the network in which each device node is clearly represented.

Multi-Vendor Support

ECView Pro NMS offers multi-vendor support, meaning that a large range of tier one vendor switches are automatically recognized, in addition to Edge-Core and SMC switches. Further, object attributes are automatically discovered and can be easily changed. By right-clicking on an icon, users can provision and manage various network devices through CLI, Telnet, MIB browser, Web interface, or Edge-Core's own Basic View.

Wireless AP Support

In addition, certain SNMP-enabled Wi-Fi access points, such as Edge-Core's own EAP8518 for example, can be managed and provisioned through ECView Pro, making unified wired/wireless access a reality at last.

Network Firmware Upgrades

ECView Pro NMS ensures that all network elements are provisioned with the latest software. It maintains control of software releases and perfoms on-demand or scheduled upgrades to Edge-Core, SMC, and third-party network devices.

With its powerful interface, provisioning capabilities, robust auto-discovery, scalable event-driven architecture, flexible configuration, and low-cost deployment, ECView Pro NMS offers enterprise customers powerful tools for the management of Edge-Core and third-party switches.

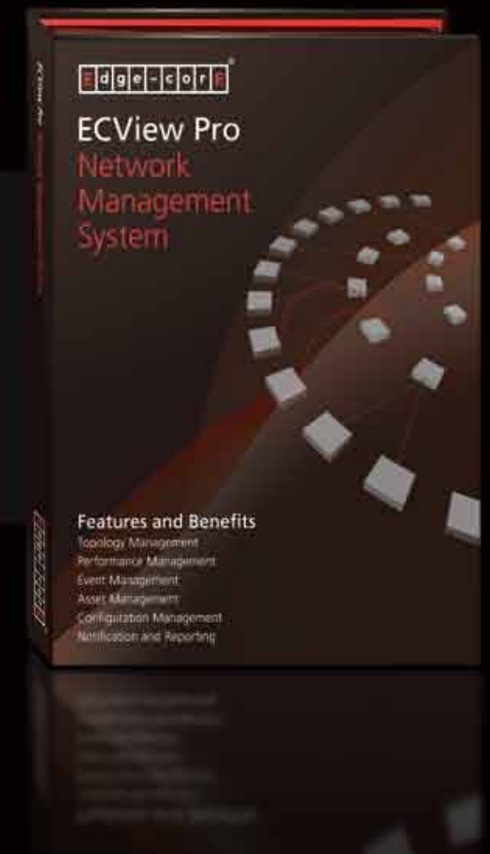
ECView Traffic Analyzer

New this year is ECView Traffic Analyzer, the network traffic analyzer solution of Edge-Core Networks' ECView Network Management System. It clearly displays the type of network traffic crossing the system, and provides the perfect solution to help network administrators in an orgaization analyze the impact of traffic on the network and also assist with network planning. Network managers can easily identify and remedy performance issues, for example congestion and bottlenecks in the network. ECView Traffic Analyzer is based on industry standards and is very simple to deploy. It provides real-time visibility of network traffic and displays network activity graphically. Moreover, Traffic Analyzer integrates seamlessly with ECView Pro Network Management System.

Network Traffic Analysis

ECView Traffic Analyzer allows network managers to analyze a wide range of network traffic by providing an in-depth view of bandwidth consumption by devices and applications. In addition, it can identify applications, hosts, and conversations that consume bandwidth with easy-to-understand graphical reporting. Furthermorre, network managers can drill down from high-level enterprise summaries to detailed flow records with just a few mouse clicks. Network managers can traget specific devices in a project and get details about those applications which are utilizing excess network resources. For example, managers can drill down to see which MAC/IP addresses are most active or which systems are using the most bandwidth on any network segment being monitored.

ECView Traffic Analyzer through its multiple protocol support, drill down feature, traffic baselining, advanced filtering capabilities, application profiling, and powerful reporting mechanisms, provides the flexibility to diagnose traffic on mission-critical networks.



ECView Pro
Network Management System

Feature Highlights:

- Multiple Switch Vendor Support
- Multi-Language Support
- SNMP Support
- Support for Multiple Discovery Protocols for Robust Device Identification
- Configuration Management
- Asset Management
- Powerful Network Topology Mapping Tool
- Proactive Network Monitoring
- Event Notification and Reporting

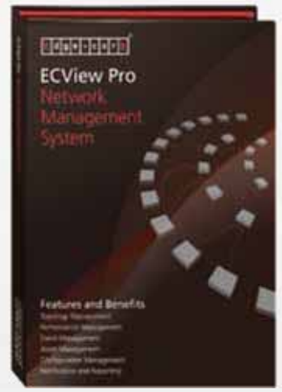
ECView System
Traffic Analyzer Module

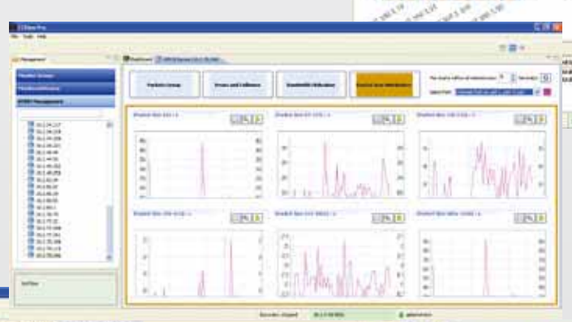
Traffic Analyzer
Feature Highlights:

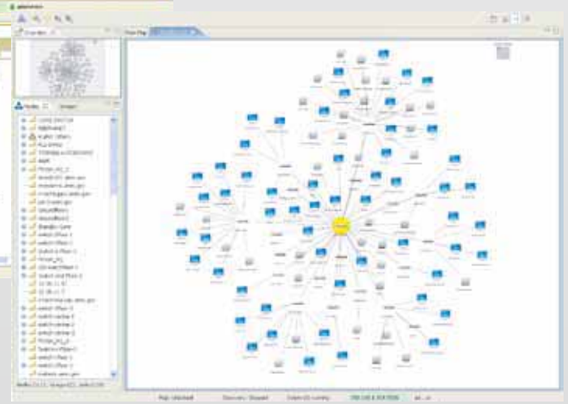
- Multi Vendor Support
- Multiple Protocol Support
- Track Specific Devices Using Projects
- In-depth Network Traffic Analysis
- Baseline With Past Traffic Flows
- Advanced Port/Protocol Filtering

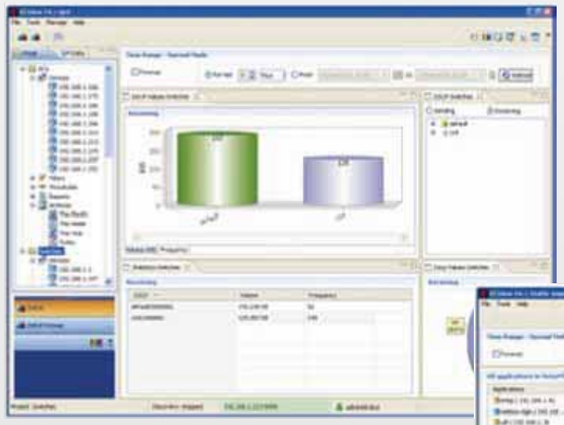
System Requirements for ECView Pro Client/Server:

- Microsoft Windows 2000 SP4 or higher
- Windows 2003/2008 Server
- Windows XP SP1 or higher, Windows 7
- Solaris 2.8 or higher
- Red Hat Linux
- SuSE Linux









- To learn more about ECView Pro and integrated solutions from Edge-Core, visit www.edge-core.com/nms

Wireless Solutions

Every day hundreds of millions of people use Wi-Fi. In these technology-savvy times, people expect Wi-Fi to be available in a multitude of places, from coffee shops and restaurants to airports and even on some classes of trains. Yet, Wi-Fi technology was developed primarily to enable wireless data networking in local areas. As a result, scaling Wi-Fi to provide service to growing numbers of users over a large expanse of space presents a unique challenge to network administrators around the world.

To properly address these concerns, Edge-Core's Wi-Fi products are designed with scalability in mind. For example, our 802.11n access point, the EAP8518, can be managed, controlled, and provisioned by ECView Pro, Edge-Core's own network management system. The advantage of this approach is eliminating the need for an expensive dedicated device for WLAN control, thereby enabling our customers to realize a unified wired/wireless network.

Our line of access points feature:

- Superior weatherproof design of outdoor models, enabling full operation in the most inhospitable environments
- High power RF design, which greatly extends service coverage
- WDS support, which allows the extension of networks by wirelessly bridging a number of access points together to form a larger network
  - Point-to-point links for building-to-building connectivity, bridging, and backhauling
  - Point-to-multipoint links to extend the main network to remote branch offices, warehouses, or other exterior buildings without leased lines
- RSSI LED indicator, which makes the task of reading receive signal strength effortless
- Multiple BSSID support, enabling different classes of service

WLAN 802.11n wireless network:

Edge-Core's innovative indoor and outdoor AP products support WLAN 802.11n, the IEEE's state-of-the-art wireless network standard. This allows users to stream data faster than ever before, with throughput rates which can reach 600Mbps.

This HT (High Throughput) standard is achieved by implementing improvements in the PHY (physical layer) and the baseband of the radio:

- The number of antennas has increased, up to 4 (maximum), and multiple-input multiple-output (MIMO) has been added, allowing each of the antennas to stream independently. This technological advance increases the throughput rate up to 4 times that of the previous generation.
- Channel bandwidth has increased up to 40 MHz, doubling the PHY data rate over a single 20 MHz channel.
- The number of sub-carriers per channel has increased
- And reduced guarding time and data overhead translates to an increase in the throughput rate.

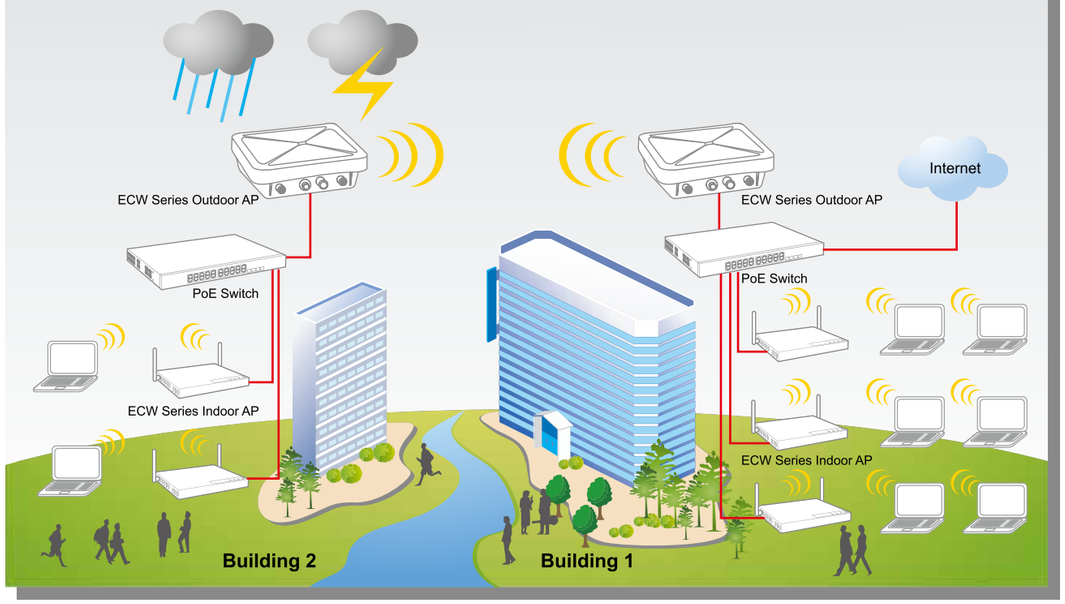
Full support for 802.11a, b, and g

Edge-Core wireless indoor and outdoor 802.11n access points offer full backward compatibility with earlier generation modes 802.11a, 802.11b, and 802.11g. This means you enjoy full inter-operability with old and new access points in your wireless network.

Enterprise Inter-building Solution

Point-to-Point Wireless Link

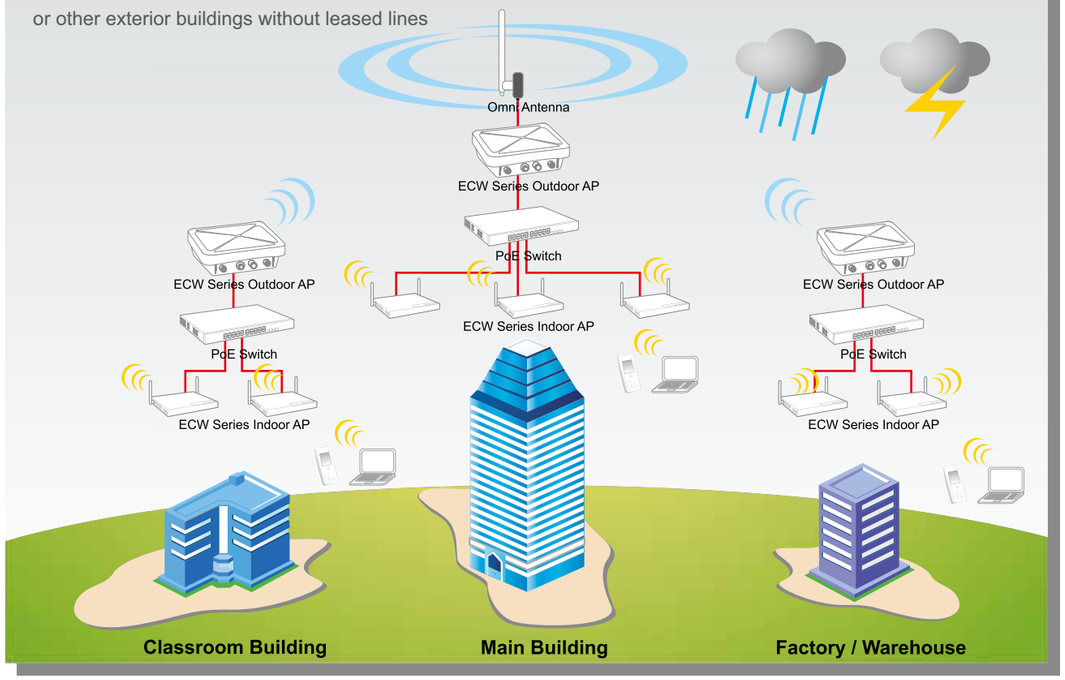
- Building-to-building connectivity, Bridging, and Backhauling
- Cost-effective and efficient (no cabling or leased line needed, easy to deploy)



Enterprise Campus Connectivity

Point-to-Multipoint Wireless Link

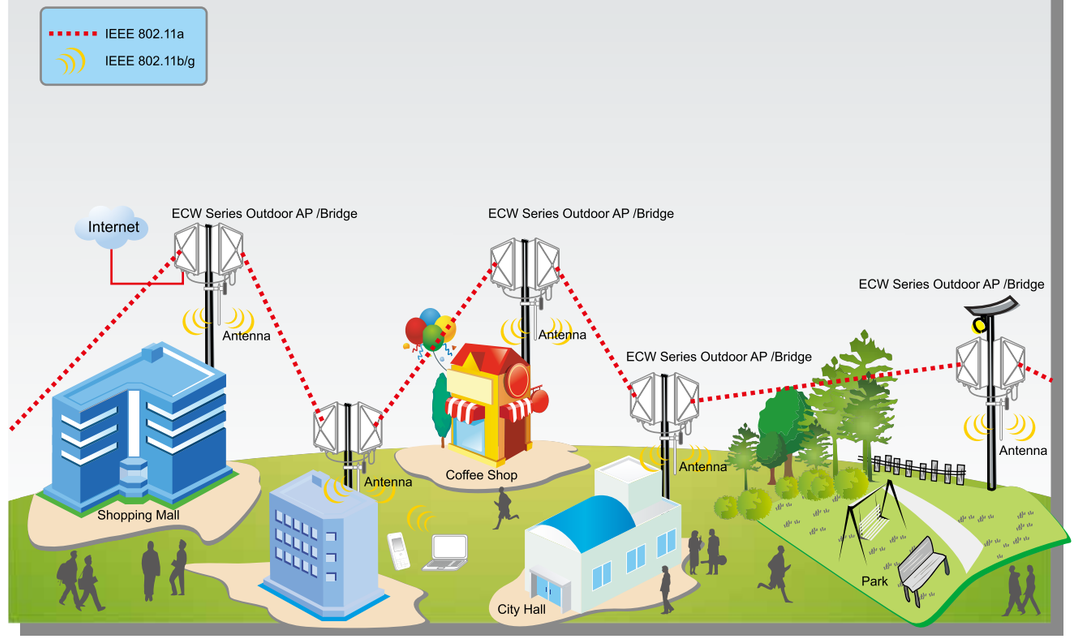
- Links extend the main network to remote branch offices, warehouses or other exterior buildings without leased lines



Metropolitan Area Network

Back-Haul Alternative

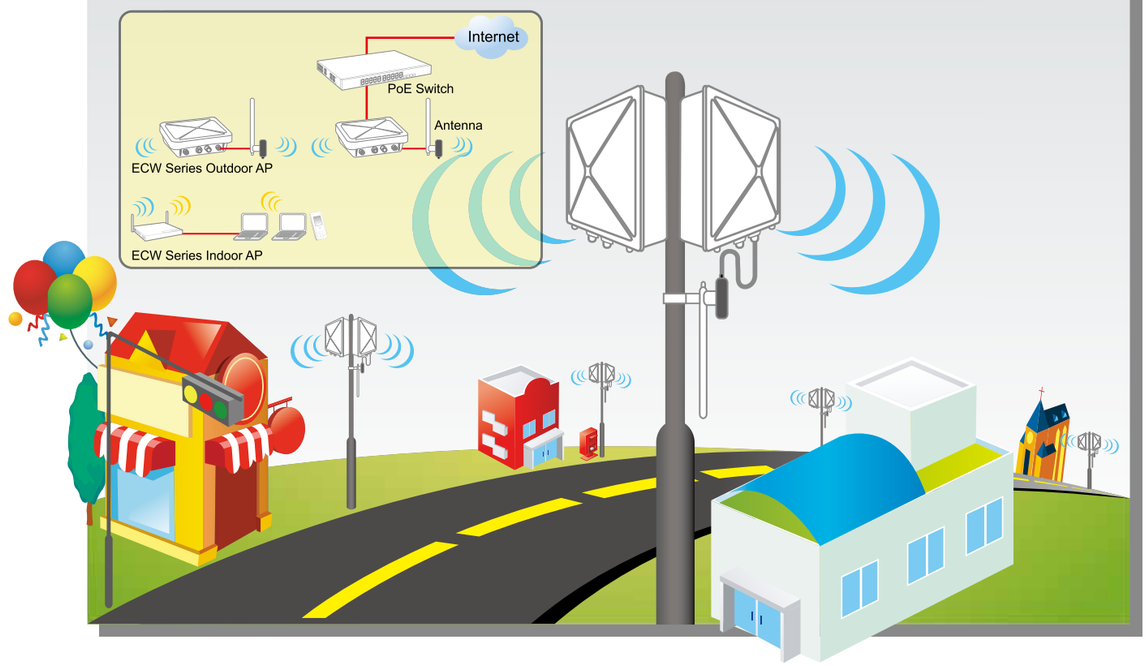
- Back-haul alternative for hotspots, hot zones, and community networks



Last Mile Access

Last Mile Access

- Competitive broadband service alternative to DSL or cable modems for business and residences
- Broadband service for rural area where there is no DSL



Edge-Core Wireless Indoor APs, ECW Series

Wireless Indoor EAP

WA6102X
EAP8518

Edge-Core Wireless Indoor Enterprise AP Series devices provide users with secure, robust and high performance data transmission, easy access to information, and resources for increased productivity and wireless coverage supporting both 2.4GHz and 5GHz radio bands.

Detachable antennas allow a variety of external signal options for extending radio range and shaping the coverage area. With its strong authentication, data privacy, and packet integrity features, the Edge-Core Wireless Indoor AP Series maintains data security over open air. The EAP8518 can be managed, provisioned, and controlled by ECView Pro.

Product Model	WA6102X	EAP8518
Fixed Ports		
100BASE-TX Port	1	
1000BASE-T Port		1
Console Port with RJ-45 connector		1
Physical Configuration		
Form Factor	Desktop / Wall mountable	Desktop / Wall mountable
Radio	802.11a/b/g	802.11a/b/g/n
Antennas	2 x 5dBi detachable antennas 802.11b/g: 2.5dBi , 802.11a: 5dBi Omni-Directional Antenna	3 x 5dBi detachable antennas 3dBi in 2.4GHz, 5dBi in 5GHzRadio High Gain Omni-Directional Antenna
Environment		
Temperature Range	0ºC to 50°C	-10ºC to 55°C
Wireless		
AP and WDS modes	•	•
Master / Slave	Configure by software	•
RSSI	CLI	
Multiple SSIDs	•	•
Turbo Mode a/g	•	
L2 Features		
VLAN	•	•
Spanning Tree	•	•
Broadcast Strom Control	•	
QoS		
IEEE 802.11e -- WMM Baseline	•	•
WMM-Scheduled Access	•	•
Security		
WPA/WPA2	•	•
WEP: 64, 128,152	•	WEP: 64, 128
RADIUS	•	•
EAP (Extensible Authentication Protocol)	•	•
SSH	•	•
Management		
WEB	•	•
Telnet	•	•
CLI	•	•
SNMP	•	•
Dimension		
(HxWxD) cm	21.8 x 13.7 x 3.2cm	18.8 x 15 x 2.2
Weight	1.54kg	1.2kg

Edge-Core Wireless Outdoor APs, ECW Series

Wireless Outdoor OAP

WA6202A
WA6202AM
Antennas

Edge-Core Wireless Outdoor AP Series devices are ideal for enterprises, campuses or off-site locations that require LAN or Internet access without the availability of wired networks to extend network coverage. They provide point-to-point or point-to-multi-point connectivity solutions. Point-to-multipoint connections require 1 unit acting as master with up to to 5 slave units, extending the main network to remote branch offices, warehouses or other exterior buildings without leased lines.

These fully weatherproof robust outdoor units feature extended operating temperature ranges from -40 to +60 degrees Celsius and guard against wind vibration, water, lightning, shock, and other environmental hazards.

Product Model	WA6202A	WA6202AM
Fixed Ports		
100Base-TX Port	1	1
1000Base-T Port		
RS-232 console Port	1	1
Physical Configuration		
Form Factor	Desktop / Wall mountable	Desktop / Wall mountable
Radio	802.11a/b/g	802.11a/b/g
Antennas	3 x N-Type connectors + 1 x 17dBi integrated panel antenna	4 x N-Type connectors
Environment		
Weather Proof	IP68	IP68
Lightning Protection	•	•
Temperature Range	-40°C to 60° C	-40°C to 60° C
Wireless		
AP and WDS modes	•	•
Master / Slave	Configure by Software	Configure by Software
RSSI	LEDs, WEB	LEDs, WEB
Multiple SSIDs	•	•
Turbo Mode a/g	•	•
L2 Features		
VLAN	•	•
Spanning Tree	•	•
Broadcast Strom Control	•	•
QoS		
IEEE 802.11e -- WMM Baseline	•	•
WMM-Scheduled Access	•	•
Security		
WPA/WPA2	•	•
WEP: 64, 128,152	•	•
RADIUS	•	•
EAP (Extensible Authentication Protocol)	•	•
SSH/SSL	•	•
Management		
WEB	•	•
Telnet	•	•
CLI	•	•
SNMP	•	•
Dimension		
(HxWxD) cm	7.4 x 19 x 19.5	7.4 x 19 x 19.5
Weight	1.5kg	1.5kg

Edge-Core Wireless Antennas

Product Model	ACC04-050280	ACC04-054270	ACC04-20212A	ACC04-200180	WA5201M-CBL-3
Description	High Gain Omni-Directional Antenna	High Gain Omni-Directional Antenna	High Gain Directional Panel Antenna	High Gain Omni-Directional Antenna	Low Lose Antenna Extension Cable
Supported Model	WA6202A/6202AM	WA6202A/6202AM	WA6202A/6202AM	WA6202A/6202AM	WA6202A/6202AM
Electrical Specifications					
Frequency Range	2.4 - 2.5 GHz	2.4 - 2.5 GHz	5.15 - 5.875 GHz	4.9 - 5.35 GHz	DC~6 GHz
Gain	8 dBi	8 dBi	23 dBi	8 dBi	N/A
VSWR	2.0 :1 Max.	2.0 :1 Max.	2.0 :1 Max.	2.0 :1 Max.	1.5 : 1 Max.@ DC~6 GHz
Polarization	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical	N/A
HPBW/horizontal	360°	360°	9° - 10°	360°	N/A
HPBW/vertical	15°	15°	9° - 14°	12°	N/A
Downtilt	0°	0°		0°	N/A
Power handling	10 W	2 W	20 W	20 W	N/A
Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
Connector	N Jack	N Plug	N Jack	N Jack	N Plug x 2
Sidelobe level	-10 db	-11 db	-20 dB (Max.)	-11 db	N/A
Front-to-back ratio	N/A	N/A	30 dB (Min.)	N/A	N/A
Cable length					3 m
Insertion loss	N/A	N/A	N/A	N/A	1.1 dB Max.@ DC~3 GHz / 1.6 dB Max.@ 3~6.0 GHz
Enrironmental / Mechnical					
Survival wind speed	216 km/hr	216 km/hr	216 km/hr	216 km/hr	
Temperature	- 40°C to +80°C	- 40°C to +80°C	- 40°C to +80°C	- 40°C to +80°C	- 40°C to +85°C
Humidity	95% @ 55°C	95% @ 55°C	95% @ 55°C	95% @ 55°C	95% @ 25°C
Lightning Protection	DC Ground	DC ground	DC ground	DC Ground	N/A
Radome material	Fiber glass	Fiber glass	Fiber glass	Fiber glass; UV resistant	N/A
Radome color	Gray-white	Gray-white	Gray	Gray	Black
Weight	340 g	164 g	1.2 Kg	280 g	1.0 Kg
Dimension	80 x 78 x 520mm	21 x 580mm	320 x 320 x 18mm	80 x 78 x 373mm	N/A